

II. RESPONSE TO OFFICE ACTION

A. Status of the Claims

Claims 1-48 were pending at the time of the Action. Claims 1-8, 10, 11 and 24-48 stand rejected, and claims 9 and 12-21 are objected to. Claim 2 has been canceled, and claims 1, 3-5, 7, 12, 15, 20, 21, 34, 35, 40, and 43 have been amended in the Amendment contained herein. New claim 49 has been added. No new matter is added by the amendments or the new claim. Therefore, claims 1 and 3-49 are pending after entry of the Amendment.

B. Rejections Under 35 USC § 103, First Paragraph

1. *The standard for establishing a *prima facie* case of obviousness.*

It is well settled that “[t]he examiner bears the initial burden of factually supporting any *prima facie* case of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under *no* obligation to submit evidence of nonobviousness.” *Manual of Patent Examining Procedure* (M.P.E.P.) § 2142 (8th Ed. Inc. Rev. No. 1) (emphasis added).

To establish a *prima facie* case of obviousness, the Action must show: (1) some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) a reasonable expectation of success; and (3) the prior art reference teaches or suggests all of the claim limitations. *See In re Vaeck*, 947 F.2d 488, (Fed Cir. 1991). With respect to element (1), “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” M.P.E.P. at § 2143.01. If any one of the three elements is missing, an obviousness rejection cannot be maintained.

2. The rejection over Laurent et al. in view of Lim et al. is improper.

Claims 1-8, 10-11, 22-30 and 34-48 stand rejected under 35 USC § 103 as being obvious over Laurent *et al.* (US 2002/0046431 A1) in view of Lim *et al.* (US 6,461,391 B1). The Action states that Laurent *et al.* teaches the elements of the rejected claims except for reciting cationic tertiary para-penylenediamine compounds as oxidation bases and that Lim *et al.*, teaches tertiary para-penylenediamine compounds having all the limitations of claimed formula (I). The Action alleges that it would have been obvious for one of skill in the art to modify the teachings of Laurent *et al.* by using the oxidation bases of Lim *et al.*, motivation being provided by the compounds of Lim *et al.* being “suitable primary intermediates for hair coloring compositions for providing good oxidative coloration of hair such as light fastness, fastness to shampooing, fastness to permanent wave treatment and suitable for providing a wide variety of different color shades with primary intermediate and coupler compounds.” Applicants respectfully traverse.

a. There is no motivation to combine the teachings of Laurent et al. with the teachings of Lim et al.

When obviousness is based on the teachings of multiple prior art references, the Action must establish some “suggestion, teaching, or motivation” that would have led a person of ordinary skill in the art to combine the relevant prior art teachings in the manner claimed. See *Tech Air, Inc. v. Denso Mfg, Mich, Inc.*, 192 F.3d 1353, 1358-60 (Fed. Cir. 1999); *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1572 (Fed. Cir. 1996). The reason, suggestion or motivation to combine prior art references must be based explicitly or implicitly: 1) in the prior art references themselves; 2) in the knowledge of those of ordinary skill in the art that certain references, or disclosures in those references, are of special interest or importance in the field; or 3) from the nature of the problem to be solved, “leading inventors to look to references relating to possible solutions to that problem.” *Ruiz v. A.B. Chance Co.*, 234 F.3d

654, 665 (Fed. Cir. 2000). As stated by the Federal Circuit, “Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.” *Dembiczak*, 175 F.3d at 999; *see also Ruiz* 234 F.3d at 665 (explaining that the temptation to engage in impermissible hindsight is especially strong with seemingly simple mechanical inventions). This is because “[c]ombing prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint of piecing together the prior art to defeat patentability – the essence of hindsight.” *Dembiczak*, 175 F.3d at 999. Thus, it has been consistently held that a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but some motivation to combine the prior art teaching in the particular manner claimed. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Thus, “particular finding must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.” *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000) (emphasis added). “In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with the knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.” *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998), emphasis added.

Applicants respectfully assert that the references do not supply a reason, suggestion or motivation to combine Laurent *et al.* and Lim *et al.* As stated in MPEP § 2143.01: “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” The motivation to combine the references proffered by the Action is that Lim *et al.* states that the disclosed

quaternary oxidation bases are suitable for the claimed utility, not an unusual statement in a patent application. If this was a sufficient finding to support a *prima facie* case of obviousness, Laurent *et al.* could be readily combined with any patent application disclosing oxidation bases. Such ease of combining references is not the law. The Action states that Laurent “teaches a hair dyeing composition comprising oxidation bases such as para-phenylenediamine compounds represented by a formula (1).” However, Laurent *et al.* teaches a specific dyeing composition directed to slowing the development of the oxidizing agent, requiring a composition comprising a combination of either an oxyalkylated fatty alcohol or a glycerolated fatty alcohol and a hydroxylated solvent in addition to an oxidative dye and a cationic amphiphilic polymer comprising at least one fatty acid. Laurent *et al.* broadly discloses suitable oxidant dyes, such that “representative oxidation dyes include ortho-phenylenediamines, para-phenylenediamines, double bases, ortho-aminophenols, para-aminophenols, heterocyclic bases and their acid addition salts” (paragraph 0264). The para-phenylenediamines are themselves broadly disclosed in a generic formula, wherein the thousands of potential structures include, once the “R” groups have been suitably parsed, pyrrolidine derivatives. Lim *et al.* discloses “useful hair coloring systems [that] comprise quaternized pyrrolidone compounds” (Abstract). Why replace the generically disclosed pyrrolidine containing bases of Laurent *et al.* with the quaternized bases of Lim *et al.*? **Nothing** in either reference provides a motivation or suggestion of the **particular** desirability to modify the **specific** compositions of Laurent *et al.* directed to slowing the rate color formation with the **particular** quaternized dyes of Lim *et al.*, as opposed to any other possible oxidant base.

Further, the nature of the problem to be solved does not supply a reason, suggestion or motivation to combine the references. A reason suggestion or motivation has been found in the

nature of the problem to be solved when two prior art references address the precise problem that the patentee was trying to solve. This is not the case. Laurent *et al.* was trying to slow down the oxidation reaction (see paragraph [0016], page 1) and Lim *et al.* were looking for oxidation bases with relatively weak sensitizers. The instant application is trying to improve chromatic, fastness, selectivity and intensity properties of cationic quaternary para-phenylenediamines oxidation bases (Page 3, lines 12 – 35). Finally, there is no evidence that the knowledge of those of ordinary skill in the art would supply a reason, suggestion or motivation to combine Laurent *et al.* and Lim *et al.*.

The Action has not provided any particular findings to support an explicit or implicit reason, suggestion or motivation to combine Laurent *et al.* and Lim *et al.* in: 1) the prior art references themselves; 2) the knowledge of those of ordinary skill in the art that certain references are of special interest or importance in the field; or 3) the nature of the problem to be solved. The Action has **only** shown that the references can be combined, a standard specifically repudiated by the MPEP. Applicants respectfully assert that the Action has not met the evidentiary burden, as required by current case law, to proffer particular findings as to why a skilled artisan, confronted with the same problems as the inventors and no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.

b. *There is no motivation to select tartaric acid from the list of acidifiers in Laurent et al.*

The composition of the present invention requires in its broadest embodiments at least one cationic tertiary para-phenylenediamine containing a pyrrolidine ring, and at least one organic diacid compound. The organic diacid is a required element of the invention directed to dyeing compositions with the desired performance characteristics. Laurent *et al.* lists an organic

diacid, tartaric acid, as one of a list of a number of potential acidifying agents. None of the exemplified formulations in Laurent *et al.* utilizes tartaric acid. Also, tartaric acid is not included as an element in any of the claims. In short, nothing in Laurent *et al.* indicates that tartaric acid should be included in a dyeing composition as a required ingredient. The Action is totally silent as to why one of skill in the art, with no knowledge of the present invention, would find it desirable to utilize tartaric acid in a composition whether it needed an acidifying agent or not. The plucking of tartaric acid from its relative obscurity in a list of potential acidifying agents and its promotion to a required ingredient by the Action is simply blatant hindsight reconstruction, an action the Federal Circuit has repeatedly stated as being prohibited.

c. Request for reconsideration

In light of the foregoing, Applicants respectfully request that the rejection of claims 1-8, 10-11, 22-47 and 55-69 as being obvious over Laurent *et al.* in view of Lim *et al.* be reconsidered and withdrawn.

2. *The rejection over Laurent et al. in view of Lim et al. and further in view of Zofchak et al. is improper.*

Claims 31-33 stand rejected under 35 USC § 103 as being obvious over Laurent *et al.* (US 2002/0046431 A1) in view of Lim *et al.* (US 6,461,391 B1) and further in view of Zofchak *et al.* (US 6,461,391 B1). The disclosure of Lim *et al.* and Laurent *et al.* are stated to be as in the previous obviousness rejection. The Action acknowledges that Lim *et al.* and Laurent *et al.* do not teach or disclose the specific species of diacid compounds as claimed. Zofchak *et al.* is stated to teach a composition comprising the diacid compounds dilinoleic acid and malic acid as claimed. The Action alleges that Zofchak *et al.* teaches the equivalence of dilinoleic acid and malic acid with tartaric acid, and that one of ordinary skill in the art would be motivated to

substitute the tartaric acid of Laurent *et al.* with the dilinoleic or malic acid of Zofchak *et al.* with a reasonable expectation of success. Applicants respectfully traverse.

The combination of Laurent *et al.* and Lim *et al.* suffer from the inadequacies as described above. The attempted combination of Zofchak *et al.* removes the rejection even from the remotely credible. Zofchak *et al.* is directed to topical cosmetic compositions comprising polymeric urethane surfactants preferably derived from tertiary amines or diisocyanate compounds (Abstract). The use of the carboxylic acids recited in the specification are for reacting with hydroxyl terminated groups to form esters (col. 9, lines 25-28), to act as a counter ion in the ammonium salts formed by neutralization of free amine groups, and for the preparation of tertiary amines or amidoamines (col. 11, lines 7-14). The apparent equivalency of the diacids is allegedly derived from the disclosure at col. 10, lines 53-67:

Preferred polycarboxylic acids for use in the present invention include, for example, C₂-C₅₀ dicarboxylic acids, including dimer, trimer and tetramer acids which are made from the dimerization, trimerization or tetramerization of long-chain unsaturated acids, such as linoleic acid, among numerous other acids, including mixtures of these acids, more preferably including C₅-C₃₇ dicarboxylic acids and mixtures of these acids. Dilinoleic acid is a preferred dicarboxylic acid. Other acids which may be preferably used in the present invention include, for example, adipic acid, azealeic acid, malic acid, succinic acid, dodecanoic acid, citric acid, tartaric acid, sebacic acid, fumaric acid, glucaric acid, glutaric acid and oxalic acid, among others. Preferred dicarboxylic acids containing carboxylic groups at the terminal ends of the molecule.

Thus, Zofchek *et al.* includes long chain (up to C₅₀) dicarboxylic acid as preferred embodiments for uses that include the synthesis of ingredients for use in topical cosmetic compositions. Laurent *et al.* disclosed no long chain dicarboxylic acids, and only one dicarboxylic acid, tartaric acid (C₄), in a list of acids for use in the neutralization of hair dye compositions. The Action is actually asserting that one of skill in the art, with no knowledge of the present invention, would have mysteriously (as the Action is silent as to this point, it properly is a mystery) selected malic acid and dilinolenic acid from the list disclosed in Zofchek *et al.* to modify tartaric acid as

disclosed as one of a number of potential neutralizing acids by Laurent *et al.*, which at best is optional or at worst not required in hair dye compositions, and somehow decided to utilize the dicarboxylic acids as a required ingredient in a hair dye composition, all the time being convinced of the “equivalency” between malic acid (C₄) and dilinoleic acid (C₃₆) in their ability to modify the hair dye composition so as to produce the desired coloration and fastness properties of cationic tertiary para-phenylenediamine oxidant bases, which of course are not disclosed by Laurent *et al.* As the Action provides no more than conclusory statements as evidence to support the above chain of improbable events, the only thing that is evident is that a prime facie case of obviousness has not been established.

In light of the foregoing, Applicants respectfully request that the rejection of claims 31-33 as being obvious over Laurent *et al.* in view of Lim *et al.* and further in view of Zofchak *et al.* be reconsidered and withdrawn.

C. The Objections to Claims 9 and 12-21 are Moot

Claims 9 and 12-21 are objected to as, while being otherwise allowable, depending upon a rejected base claim. These objections are rendered moot because the base claims from which these claims depend are allowable for the reasons set forth above.

However, Applicants have added new claim 49 that incorporates formula (III) and (IV) as limitations as well as formula (II), wherein formula (II) is limited by a proviso such that R₄ cannot be an alkyl group when the linker D is a covalent bond. Applicants believe that this renders the cationic tertiary para-phenylenediamine compounds of formula (I) distinct from those disclosed by Lim *et al.* and that claim 49 is allowable independent of the above arguments.

D. Conclusion

Applicants believe that the present document is a full and complete response to the Office Action dated November 17, 2004. The present case is in condition for allowance, and such favorable action is respectfully requested.

III. REQUEST FOR EXTENSION OF TIME

Pursuant to 37 C.F.R. § 1.136(a), Applicants petition for an extension of time of three months to and including May 17, 2005, in which to respond to the Office Action dated November 17, 2004. Pursuant to 37 C.F.R. § 1.17(a)(2), a check in the amount of \$1,020.00 is enclosed, which is the fee for a three-month extension of time for a large entity. If the check is inadvertently omitted, or should any additional fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to the enclosed materials, or should an overpayment be included herein, the Commissioner is authorized to deduct or credit said fees from or to Fulbright & Jaworski Deposit Account No. 50-1212/LORE:007US.

The Examiner is invited to contact the undersigned Attorney at (512) 536-3035 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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